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AUTHOR de Moor, R. A.
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ABSTRACT

There are two sectors of higher education in the Netherlands: the universities covered by the University Education Act and the vocationally-oriented colleges covered by the Further Education Act. Following a summary of the main elements of secondary education, higher or tertiary education is defined. Thirteen universities and non-university institutions are described. Non-university institutions are defined as mostly small, private (denominational), single-purpose institutions. Courses offered by the university and non-university are discussed along with admission policies, guidance of prospective students, financial aid, costs, enrollment and transfer rates. The cost of research, source of finance, and research requirements of university faculties is explained. A review of problems of higher education centers on efficiency, the changing role of university education, building a system of mass tertiary education, and tertiary education and the labor market. Reform measures that have been taken in the area of university governance, university courses, long-term higher education, and the Open University are outlined. (SPG)

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HIGHER EDUCATION IN THE NETHERLANDS

Dutch National Report

prepared by

Professor R A de MOOR,
Catholic University of Tilburg

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There are two strictly separated sectors of higher education in the Netherlands; the universities (1), which are covered by the University Education Act, and the vocationally-oriented colleges, which are covered by the Further Education Act, which also applies to secondary education. For a better understanding of the system of higher education, the main elements of secondary education have to be made clear.

1. Secondary education

Secondary education starts at the age of 12. The main fields of education for which children (or their parents) may opt are general education and vocational training. General education is provided by three types of schools: those offering six year courses in preparation for university education, those providing five year courses giving access to the vocational college sector of higher education, and those schools offering four year courses intended as preparation for middle level vocational training. Vocational education is offered by various types of vocational schools.

The first year(s) of secondary education serve(s) as an orientation period during which teachers, parents and pupils can verify for each pupil what will be the most appropriate type of education. In order to facilitate transfer, many schools have merged into comprehensive schools comprising two or more types of schools, mostly in either general or vocational education.

The structure of secondary education and its internal and external access relations are roughly indicated in the diagram below.

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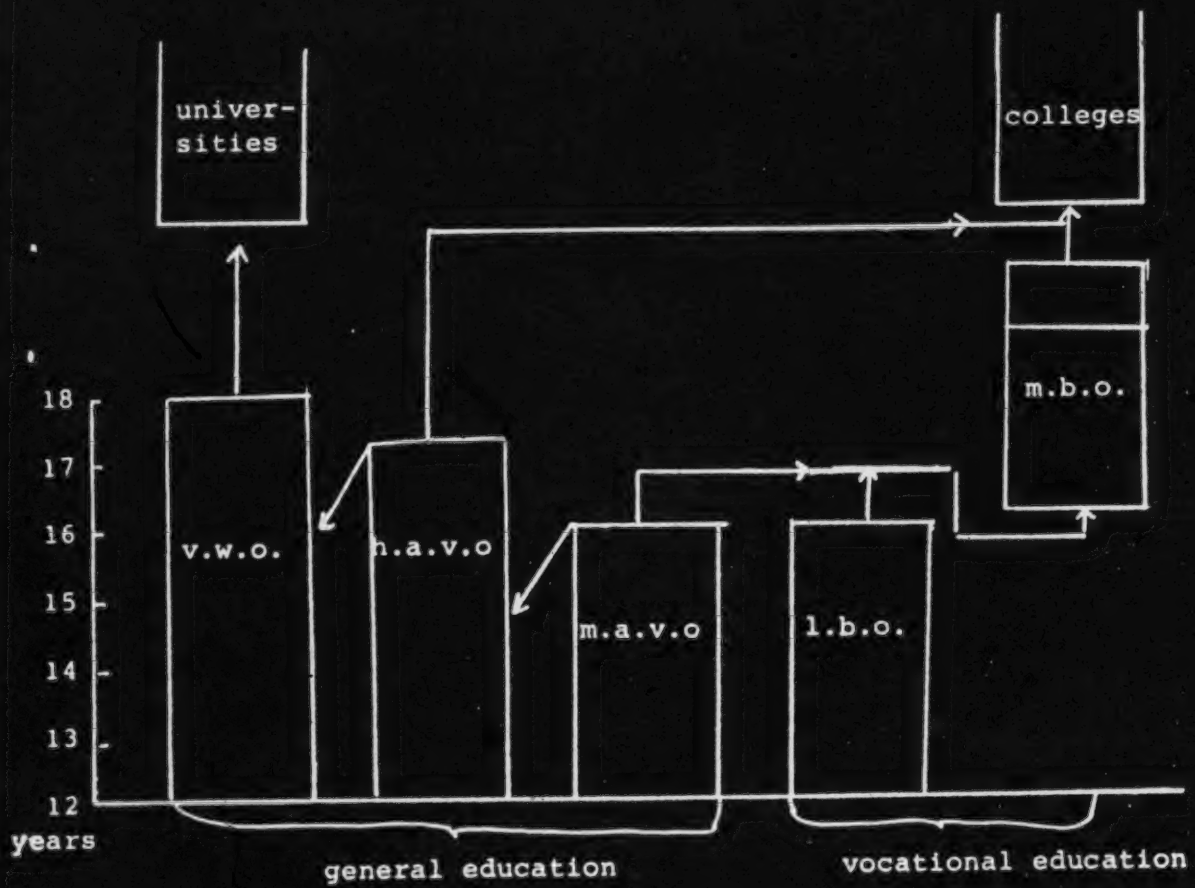
(1) These encompass also the "hogescholen".

Diagram 1



v.w.o. = university preparing education
h.a.v.o. = higher level general education
m.a.v.o. = middle level general education
l.b.o. = lower level vocational education
m.b.o. = middle level vocational education

The relative importance of the different types of schools can be concluded from table 1.

Table 1 Number of pupils in various types of secondary schools in 1975 (1)

General education			
orientation years	:	196,396	16%
m a v o	:	262,284	20%
h a v o	:	151,669	12%
v w o	:	156,042	12%
Total		766,391	
Vocational education			
lower level (l b o)	:	403,000	31%
middle level (m b o)	:	112,000	9%
Total		515,000	100%

Table 2 Percentage of pupils in the first three years of secondary education by type of education and by sex in 1974 (1)

Type of education	Boys	Girls
General education :	57%	64%
Vocational education :	43%	36%
	100%	100%

2. Higher education

The definition of higher, or rather tertiary education, needs to be wide enough to encompass all courses and institutions which may be interdependent at the post-secondary level. This would primarily require the use of the age criterion and thus define tertiary education as being education intended to serve people over 17 or 18 years old. In the Netherlands, however, the word higher education still refers to education of a certain level. A certificate of v w o, h a v o, or m b o is usually required to gain access. There we shall accept the national definition, because statistical data are based on it.

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(1) Source: Centraal Bureau voor de Statistiek. Statistisch Zakboek 1976, blz 74 and 68.

2.1 Institutions

2.1.1 Universities

University education is provided by 13 institutions.

Table 3 Dutch universities and the number of their students enrolled in 1976-77 (1)

Universities	Number of students
State universities	
University of Leyden	13,793
University of Groningen	14,475
University of Utrecht	19,820
University of Rotterdam	7,623
University of Limburg	146
Technological University of Delft	10,096
Technological University of Eindhoven	4,276
Technological University of Enschede	2,356
Agricultural University of Wageningen	4,464
City university	
University of Amsterdam	20,975
Private universities	
Free University of Amsterdam (Protestant)	11,807
University of Nigmegen (Catholic)	13,556
University of Tilburg (Catholic)	3,925
Total	127,312

The different sizes of the institutions are mainly a function of the number of their departments, the fields in which they provide courses, and the date of their creation. Dutch universities all have the same facilities and roughly the same standards. This explains why the boundaries of their recruitment areas are mainly determined by the distance between the students' homes and the nearest department in which they wish to enrol. With the private universities, a second factor plays a significant role; the religious origin of the students.

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(1) Source: Ministry of Education (using information from the Centraal Bureau voor de Statistiek).

The smaller size of the University of Tilburg and Wageningen is due to the restricted number of their departments. The same is true for the Technological Universities of Eindhoven and Twente, compared with Delf, but here it is also relevant that the growth of enrolments in engineering sciences has been relatively low and that these universities are younger than Delft (respectively 1956, 1964 and 1905 (1842)).

All universities are completely state supported and governed by the University Education Act and by the University Statute. The University Education Act determines the functions of the universities, prescribes organisation and governance structure, and makes provisions for admission and degrees, teaching staff and finance.

The Academic Statute is primarily a statute on degrees. As to the content of examinations, its regulations are very global. It states, for example, that the "Kandidaatsexamen" in physics consists either of physics, mathematics and astronomy, or physics, mathematics and chemistry, or physics, mathematics and geophysics, or physics chemistry and mathematics. As to the "doctoraal examen" it only says that it consists of physics and two ancillary subjects. The departments are autonomous when working out these regulations in a curriculum and in examinations. The main function of the Statute is to distinguish between the degree programmes and to establish transfer rights.

Apart from these provisions and from the government consent needed to create new degree programmes, the departments are autonomous in their teaching and research. This autonomy is, further, only restricted by the budgetary power of the Minister of Education and the university council. The university council decides on the budget which then has to be approved by the Minister.

The budgetary power of the Minister implies that he has to consent to the creation of a new professorship or readership. For the other categories of teaching staff and for clerical and technical personnel, informally established formulae are used. The informal nature of these formulae makes the annual university budgets conditional, in fact, on the financial position of the government. However, the legal position of university personnel hardly leaves room for decisions to decrease the budget. Within its budget, the university is free to spend the money, and to a large extent, in allocating the resources at its disposal to the various university units. And within the broad framework of legal provisions and budgetary control, the departments are free to change their curriculum, to introduce new subjects and to explore fields of research.

2.1.2 Non-university institutions

Although in Dutch the non-university institutions have a variety of names, they will all be indicated as colleges. These colleges are mostly small, private (denominational), and single-purpose institutions. As is usual in the Netherlands, although private institutions, they are for the most part completely financed by the central government.

Table 4 covers most of the institutions which are state supported. The most important field not included is para-medical education.

Table 4 Full-time colleges and their full time enrolments in 1975-76 (1)

Type of institutions	Number of institutions	Number of students
Colleges of technology	31	19,069
Colleges of laboratory science	23	5,260
Nautical colleges	9	2,195
Colleges of agriculture	10	2,914
Colleges of domestic science	13	5,486
Business schools	12	5,256
Colleges of social and cultural work	35	19,449
Art colleges	35	9,651
Colleges of education:		
for primary school teaching	90	25,225
for lower secondary school teaching	7	9,123

Contrary to the university sector, the sector of higher vocational education includes a considerable number of part time courses and therefore of part time students.

In 1975, in this sector, 105,830 full time students were enrolled and (in 1974) there were 54,377 part-time students. The most important fields in part-time education are teacher training (36,156 students), mostly preparing for secondary education), social and cultural work (7,498 students), art education (3,938 students) and technical education, mainly laboratory work (3,445 students). Part-time education is provided by 142 institutions (2) of which 72 primarily offer full-time education.

The origin of higher vocational education lies in secondary education. The Industrial Education Act of 1919 introduced two levels of vocational training on the secondary level. Gradually, in some fields, three levels were developed through a process of up-grading. This process was acknowledged in the Further Education Act of 1963, but the highest level was kept in the framework of secondary and further education. For the colleges this meant:

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(1) Source: Centraal Bureau voor de Statistiek. Mededelingen No. 7660 and No. 7638.

(2) Commissie Open School/Commissie Ontwikkeling Hoger Onderwijs Open Hoger onderwijs, Appendix 3, p. 55.

- rather detailed curriculum prescriptions;
- a teaching load and other working conditions rather similar to those of secondary schools;
- close financial supervision by the government;
- a planning procedure favouring dispersion of small institutions throughout the country;
- less generous provisions for students (grants, housing, meals);
- the institutions had less prestige and, usually, lower salary scales and career prospects for their graduates.

2.1.3 Education by correspondence

Correspondence courses are rather important in the field of college level education. The two most important (commercial) institutions for correspondence education offer 90 courses at this level (1). These institutions are "De Leidse Onderwijsinstellingen" and "het Koninklijk PBNA".

2.2 Courses

2.2.1 University courses

The areas in which university degree courses are offered are listed below.

University courses are, with rare exceptions, organised as full time courses. In many departments there are, however, a lot of part time students. Part time study is possible due to the fact that class attendance is not compulsory and students are free to decide when to sit for examinations.

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(1) See Open Hoger Onderwijs, p. 56.

Table 5 Areas of university degree courses and the number of students enrolled in 1960-61 and 1976-77 (1) (except some minor areas)

Areas	Number of students in 1960-61	in 1976-77	Increase in percentages
Theology	1001	2087	108
Languages and history	5282	16716	216
Medicine	5473	13178	141
Dentistry	858	2573	200
Veterinary science	470	1176	150
Mathematics and natural sciences	6281	14393	129
Engineering sciences	7916	16515	109
Agricultural sciences	1113	4155	273
Law	3014	14539	383
Economics	4325	10105	134
Social sciences	1980	7123	260
Psychology	1634	8838	441
Pedagogy/applied social science	400	7717	1829
Geography	980	3691	277
Philosophy	-	1434	-

A rather common characteristic of all university courses is their specialised and discipline-oriented nature. From the first year the student specialises in chemistry or physics, in sociology or cultural anthropology. Broad liberal education curricula are not available. A related characteristic is a rather strong division between the humanities, the natural sciences and social sciences. Although in most departments a lot of optional courses can be taken, only a few students cross the borderlines between these three areas of study.

Under the University Education Act, the objective of university education is to prepare students for independent scientific work and for professions for which such an education is needed or is useful. This may explain why the universities do not have a sequence of programmes

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(1) Source: Ministry of Education (using Centraal Bureau voor de Statistiek sources).

(eg Bachelor's degree, Master's degree and PhD degree), but only programmes leading, without intermediate levels, to a final degree for course work (doctorandus or ingenieur). In this degree programme the graduate has to qualify for independent research work. Therefore, Dutch universities do not have PhD courses. The doctor's degree is granted for a dissertation, written independently and only supervised by a professor or reader of the department concerned (promotor).

Until 1975 the University Education Act had not fixed the number of years for a university degree course. The schedule of lectures, seminars, essay-work and laboratory work filled (and fills) five or six years. Actually, most students need considerably more time to graduate.

2.2.2 College courses

The distribution of students in the various fields, in the college sector, is given in table 6.

Table 6 The distribution of full time and part time students in non-university education, in the various fields in 1975 respectively 1974 (1)

Field	Full time students (1975)	Part time students (1974)
Technical education	23632	5005
Nautical education	3668	
Agricultural education	2914	
Domestic and industrial education	2125	526
Business education	5065	
Social and cultural work education	19766	10312
Art education	7956	2917
Teacher training (primary schools)	25225	7261 (2)
Teacher training (secondary schools)	15479	28356
Total	105830	54377

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(1) Source: Centraal Bureau voor de Statistiek. Statistisch Zakboek 1976, p. 75 and 78.

(2) Only special qualifications for those being already qualified for primary school teaching.

Colleges usually have three or four year vocationally-oriented courses. In four year courses, one year is spent in doing practical work outside college. The tendency is to broaden the courses and to strengthen their theoretical level, and to enable students by a more profound basic education to learn independently. The colleges of technology have gone farthest in upgrading their courses in this way and in approaching university standards. On the other hand, colleges of social and cultural work have moved away from a predominantly cognitive orientation and are stressing more than before social skills and sensitiveness to concrete social relations.

Traditionally, teaching methods and study habits in colleges have been more akin to those in secondary schools than to those in the universities. Since several years, however, the tendency is to allow students more freedom in attending classes, in optional subjects and in examinations.

2.3. Access to higher education

2.3.1.Admission

There is a fundamental difference in admission policy between the two sectors of higher education. Everybody who meets the entry requirements must, under the University Education Act, be admitted to the university and university course of his choice, whereas the colleges are allowed to select their students. In order to meet the problems of overcrowding, which could no longer be ignored at the beginning of the seventies, temporary legal provisions have empowered the government, since the course year 1972-1973, to restrict admission to departments throughout the country which run the risk of getting overcrowded. Numerus clausus decisions are taken only year by year. Unless demand decreases sharply, numerus clausus will be inevitable for a long time at least for medicine, dentistry and veterinary medicine. For the course year 1977/1978 admission is also restricted in the fields of biology,pharmacy, French, English, history, history of art and Dutch.

In the case of numerus clausus, admission is based on a lottery system in which schoolmarks have some influence on the students' chances in the lottery. The schoolmarks on the leaving certificate are not quite comparable throughout the country because they are based not only on marks for nationwide written examinations, but also on internal examinations designed and marked by the schools themselves. Students to whom admittance has been refused are free to take part in the lottery in the following years.

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Apart from numerus clausus, all graduates of a six year general secondary education study-line have access to university education. University departments may, however, require that one or two subjects be part of the final examination. If not, the applicant has to prove satisfactory knowledge in these subjects. Moreover, everyone who has reached the age of 25 may gain access after an examination of his capability by a department committee. Finally, the college leaving certificate entitles access in those cases where colleges and universities offer courses in comparable areas of study, but only to the related field of study. Those college graduates who are admitted have to start in the first year of the university curriculum, except for the graduates of those courses of colleges of education which qualify for teaching in the first year of v.w.o. and the first three years of h.a.v.o. The latter graduates do not have to sit for the "Kandidaatsexamen" (usually at the end of the third course year) but have direct access to the programme of the last two course years. They may however be obliged to take some additional courses.

Access to the vocational colleges usually requires a certificate of v.w.o., h.a.v.o. or m.b.o., but as has been said, the colleges select from those holding one of these certificates. Moreover access may be restricted to those having chosen specific lines of study. On the other hand, admission may also be extended to include those not having the certificate usually required.

2.3.2. Guidance

As to the guidance of prospective students, the Ministry of Education provides written information about courses, their orientation, the necessary qualifications and about the careers for which they are appropriate.

In secondary schools one or more teachers may have the special responsibility of informing students about tertiary education opportunities. This information is supplemented by tertiary education institutions, which usually provide written information about their courses and organise special information meetings. In addition, introduction days are often held for newly arrived students.

2.3.3. Financial aid

Grants (no repayment) and interest free loans are almost exclusively provided by the government according to established rules.

Until the age of 27, university students usually get the first F 1400.- as an interest free loan and the additional amount takes the form of a grant for 70% and an interest free loan for 30%. The maximum total amount is now F 8790.- to which the tuition and registration fees are added. The same rules apply to college students, but the figures are slightly different. As a rule, only interest free loans are available for students from 27 to 47 years old.

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The criteria to be considered for grants and loans are income (of parents for unmarried students) and property. These criteria are rather broad so that there are no financial barriers to higher education.

2.4 Costs

In 1974 the Netherlands spent 2.1% of its national income on higher education. In table 7 the recurrent costs per student in 1974, in the most important fields of university and college education are given.

Table 7. Recurrent costs per student in 1974 per field of study (1)

Field of study	Costs per student (in D FL)
Universities	
Law	5,200
Economics	6,100
Humanities	11,200
Social sciences	8,100
Medicine (exl. university hospitals)	37,600
Dentistry	30,000
Veterinary medicine	45,600
Mathematics and science	30,900
Engineering sciences	27,675
Agricultural sciences	27,000
Colleges	
Colleges of technology	7,740
Colleges of laboratory science	6,890
Nautical colleges	6,820
Colleges of agriculture	9,710
Business schools	5,480
Colleges of social and cultural work	7,440
Colleges of music	12,410
Colleges of design	7,200
Colleges of education (primary school)	5,300

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(1) Source: Centraal Bureau voor de Statistiek. Mededelingen No. 7634 en 7652.

When comparing the cost data of universities and colleges one has to take into consideration that in the case of the universities the research costs are included, whereas in the colleges no research is done. However, the question remains as to whether the price of university research is not unnecessarily high(and also the price of college education, due to small classes.) Secondly,it should be borne in mind that the costs per university graduate are unfavourably influenced by the high drop out rate and long period of enrolment (see section 4.1).

Both factors are far less influential in the college sector.

2.5 Growth of enrolments

From 1960-61 till 1976-77 (inclusive) the total number of enrolments in the universities has increased from 40,727 to 127,312 (210%),the number of freshmen from 7,201 to 20,069 (179%).

Growth in the sixties can be explained for about fifty percent by the high birth rate in the post war years, for the other half by the increased participation in secondary education preparing for university. At the end of the sixties the effect of this increased participation was reinforced by a rapid increase of transfer rates from secondary to university education (1).

One of the factors contributing to these latter developments is th increase in female participation. Their share among the total number of university students increased from 18 to 26%, and in the case of first enrolments from 19 to 31%.

In table 8, the effect of growth for the composition of the student body per field of study is given.

Table 8 The distribution of university students in 1960-62 and 1974-76 per field and sex (in percentages)

Field	Percentage of students 1960-62			1974-76		
	Total	M	F	Total	M	F
Theology and philosophy	2	3	1	3	3	2
Humanities	13	9	30	12	8	23
Medical sciences	16	16	17	14	14	14
Mathematics and sciences	16	17	12	12	13	8
Engineering and agricultural sciences	22	26	3	17	21	5
Social sciences, law and economics	24	24	20	26	29	20
Psychology and pedagogy	5	3	13	13	9	26
Geography	2	2	3	3	3	2
	100	100	100	100	100	100

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(1) De toekomstige ontwikkeling van het aantal studenten bij het wetenschappelijk onderwijs. Rapport van de Commissie voor Statistisch Onderzoek 1970 van de Academische Raad, Staatsuitgeverij, 's-Gravenhage 1971, p.3.

In medical sciences the restriction of admission has artificially slowed down growth. In the other fields the proportion of enrolments has declined in sciences and engineering sciences in favour, particularly, of psychology and pedagogy. The enrolment growth patterns are different for male and female students. Males increased their share in the social sciences as well as in psychology/pedagogy, females only in the latter field. For male students, the change of interest led to a decreasing share of the sciences and engineering sciences, for female students to a lesser proportion in the humanities.

In the Further Education Act of 1963 the - in practice - already existing level of higher vocational education was formally acknowledged. This Act came into operation in 1968. From that year to 1976/77 the college sector increased its full-time enrolments by 57%.

If we compare university and college education in related fields, the growth in total numbers was considerably higher in the college sector, except for agricultural education.

Table 9 The growth of enrolment in universities and colleges, in total numbers, from 1968 to 1976 in full-time education, persector and field

Field	Universities	Colleges
Engineering and laboratory sciences	2,929	9,092
Agricultural sciences	1,819	1,211
Economics/business schools	1,010	4,079
Pedagogy/applied social science/ social and cultural work	5,747	(1)9,247

The growth of university enrolments will probably decrease considerably in the next decade. From 1980 first enrolments are forecasted to stabilise at 23,000 students. In that year the universities will have about 140,000 students ; it is forecast that this number will increase to 158,000 students in 1990. If first enrolments continue to follow the existing pattern, only the student body of the humanities will still increase strongly. Forecasts of future full time enrolments in the college sector are only available for business schools, colleges of technology, colleges of education (primary school teachers) and some types of art education. First enrolments will increase from 18,699 in 1975 to 22,536 in 1981, and the total number from 53,577 to 69,361.

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1) To this number may be added 4741 part time students.

This forecast relates to sectors to which about 50% of present college students are enrolled. It is given, however, with even more than the usual reservations, because only figures about actual enrolments are available, not the number of applicants. There is however some reason to assume that all qualified applicants have been admitted in the past.

Transfer rates

Forecasts are calculations of what will occur under specific assumptions. One of the assumptions is about transfer rates from secondary schools. These are, to the universities, for the generations from 1967-68 (1).

	Males				Females			
	Ath.A	Ath.B	Gymn.A	Gymn.B	Ath.A	Ath.B	Gymn.A	Gymn.B
Directly	48	68	80	83	30	43	60	60
After 1 year	7	5	4	5	4	5	8	8
After 2 years	3	2	2	2	2	2	2	2
After 3 years or more	5	4	7	4	6	5	7	7
Total	63	79	93	94	42	55	77	77

Emphasis on:

Note: Atheneum A: modern languages and economics
Atheneum B: mathematics and sciences
Gymnasium A: classical languages
Gymnasium B: classical languages, mathematics and sciences.

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(1) Source: WORSA 1977, Appendix 5, 6 and 33.

In addition to qualified secondary school leavers, 2900 other first university enrolments were observed in 1976-77 (college graduates and people over 25 years) (males and females; = 14 1/2% of the total first enrolments).

The total percentage of first university enrolments of 18-20 years old was 8.6% in 1976/77, and is forecasted to reach 9.6% in 1985.

In 1974 the transfer percentage from the 5 year general education courses (h.a.v.o.) to the college sector was 58% for males and 43% for females(1). Transfer to the college sector from the various types of upper secondary vocational schools (m.b.o.) was as a rule insignificant. (The highest percentage was 15% for males in technical education).

The underlying assumption of the forecasted growth of enrolments is that there will be no significant change in the distribution of pupils among various types of secondary education and in transfer rates from secondary to higher education.

Age-groups

A second important factor of future enrolments lies in the size of future age groups. In 1975 the average number of 18-20 year olds (inclusive) was 229,200. This number will continue to rise until 1982 (246,100) and then decline to 224,000 in 1990.

3. Research in higher education

3.1 Research in the Netherlands

In 1971 a total of 57,460 man years were spent on research, of which 32,000 in industry, nearly 14,000 in research institutes and more than 11,000 in the universities. Of these 57,460 years more than 14,000 were spent by university graduates. The average cost per research worker rose from 18,000 guilders in 1959 to 50,000 in 1971 (2).

It is estimated that in 1977 industry will spend D.fl.2810 millions on science and technology research, and that the government will spend D.fl. 2557 millions, of which D.fl. 1138 millions will go to the universities. This means that 2.1% of GNP is spent on R and D (3).

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(1) Source. Centraal Bureau voor de Statistiek. Overgangen binnen het onderwijs en intrede in de maatschappij. Onderwijsmatrix 1974. 's-Gravenhage, Staatsuitgeverij 1976, Table 45, 46.

(2) Science policy in the Netherlands. Ministry of Education and Science, January 1976, p. 5.

(3) Wetenschapsbudget 1977. Tweede Kamer der Staten-Generaal, Zitting 1976-77, nr. 14101, p. 52.

About two-thirds of the research expenses by industry is attributable to five multinationals: AKZO, Philips, Shell, State Mining Company, Unilever.

The main categories of research institutions are: universities, government and semi-government research centres, and industrial laboratories. Close to the universities are inter-university institutes, research groups of the Netherlands' Organisation for Fundamental Research (ZWO) and of the Royal Netherlands' Academy of Science and Letters.

Of the government-supported research organisations outside the universities, the TNO organisation for applied research in science and technology, is the biggest one. It has a staff of 4,500 and the government pays an annual subsidy of about 200 million guilders. Another source of finance is industry which pays for contract research.

3.2 Research in higher education

The only research institutions in higher education are the universities. One of their legal assignments is the advancement of knowledge. University teachers, irrespective of rank, have, as a rule, a dual responsibility for teaching and research.

Their teaching load is not formally established, but an informal rule to which the government has seemed to agree on some occasions is that half of the available time is spent on teaching (and all related activities) and half on research.

Teaching and research are carried out in the same organisational settings: the discipline groups, departments and faculties. Decisions on research projects are mainly taken by the individual teachers or their groups. Their decisions have to be formally approved by the discipline groups to which they belong and budgets are attributed by the faculty council on the recommendation of the research committee. If researchers are not dependent on additional money, they are, actually autonomous. Budget approvals may sometimes create tensions, particularly if students in the discipline groups and councils try to influence research policy from a political point of view.

University research is financed from three sources. The most important one is through the university budget. Typically, this money is distributed on the principle that everyone has to get his share. The second source is mainly through Z.W.O.(1) which attribute money to individuals or groups of researchers on the basis of project proposals. This flow of money is particularly used to

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(1) Government's subsidy for current costs to ZWO in 1977-78 will be D.fl. 149,250,000.

promote excellence in research. The third source of money is payment for contract research. Although as a rule of minor significance, it may be an important source of income in some fields, eg in the social sciences.

Educational research is entitled to special consideration here. The Stichting voor Onderzoek van het Onderwijs (SVO) (Foundation for Educational Research) is in charge of the advancement and co-ordination of educational research, for which it will receive in 1977-78 D.fl. 14,649,000 from the government. Moreover, every university has a centre for educational research which mainly has to serve the advancement of teaching and learning in its own institution.

4. Problems of higher education

4.1 Efficiency

One of the problems of the present system of higher education is its rather low degree of efficiency which can be measured in various ways.

A high drop-out rate in the universities is one of those indicators. The most recent data are those published in 1971 for the student group of 1961-63. One of the remarkable things is that the final drop-out rate can only be established after a long lapse of time, because students may remain enrolled as long as they wish or drop out and come back. The central Bureau of Statistics (1) takes a period of 13 years to calculate drop out rates. It seems that the student group of 1961/63 will hardly differ from the group 1954-57; which means that for males (2) drop-out rates (3) vary from 15% (theology) to 47% (economics). In most departments drop out rates are higher than 25% to which the information must be added that many students drop out after several years of enrolment.

Another indicator of efficiency is the time needed to obtain a university degree. Roughly speaking, the average male student needs 7 1/2 years to obtain the degree of doctorandus or ingenieur. The broadening of admission rules without changing the system has impaired efficiency still further. College graduates are now allowed to transfer to related university departments, but then they have to start at the beginning. This means a minimum stay of 8-9 years in higher education.

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(1) Centraal Bureau voor de Statistiek. Statistiek van het Wetenschappelijk Onderwijs. Studieloopbaan van de Studentengeneraties 1955-57 en 1961-63. Deel 1, 's-Gravenhage, Staatsuitgeverij '71.

(2) Figures for females are higher.

(3) Drop-out from the university.

For college education we do not have similar data. But from the data we have we may conclude that the degree of efficiency is substantially higher.

Due to an unfavourable economic situation and rapidly rising costs of welfare provisions, the government will be forced to curtail its budget very severely in the next years.

As a consequence, the government has already made clear (1) that there will be no increase in personnel costs in the universities until 1983. To meet the still increasing number of enrolments and to cater for new needs, more efficiency will be needed.

4.2 The changing role of university education

Dutch universities have continually adapted their courses to new developments. But they have done so in line with what they consider to be their essential function: to educate for scientific work. Their education may be useful for other professions, but it is, except for some faculties such as that of medicine, not explicitly geared to practice. Still, the increasing significance of scientific knowledge for nearly all fields of human action, and the growing number of graduates who will have to work outside education and research, should be reflected in the objectives and content of university education.

On the one hand, we observe that universities are not adapting themselves sufficiently to the new roles of scientific knowledge in society and to the abilities, interests and future careers of their students, and, on the other hand, that massive enrolments while maintaining traditional structures are endangering the research function of the universities at a time when research is becoming more vital for a nation's welfare.

4.3 Building a system of mass tertiary education

The continuous increase of knowledge, the rapid and profound changes in society, and mass participation in secondary education demand a broadly defined system of mass tertiary education. This system will not only have to serve youth, but adults of all ages as well. It has to be an efficient system because of the scarcity of resources, and flexible and open to cater for the variety of educational needs in a technological society in which individual growth has also an important value. The problem is how to develop the present system of limited scope into such an open mass education system.

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(1) Beleidsindicaties (Ministry of Education, February 1977).

4.4 Tertiary education and the labour market

The relation of a system of mass tertiary education with the labour market deserves special consideration. Data supplied by arbeidsvoorziening academici" (a government bureau to place unemployed university graduates) show that in August 1977 about 3% of graduates were unemployed. This is still rather favourable compared with the 5% unemployed in the total labour force. Graduate unemployment is, at present, probably part of a general unemployment problem.

However, prospects are rather unfavourable. Due to the present age composition of the teaching body and the decreasing size of age groups, combined with the Government's growing financial problems, primary and secondary education will have a decreasing significance as an employment sector. Indeed, recurrent education and an expansion of tertiary education might increase the demand for teachers, but financing problems may interfere.

Forecasts show an oversupply of university graduates in all fields. And with all reservations that forecasts need, the oversupply (1) for traditional careers is so great that the average graduate will have to accept a relatively lower salary and a substantial proportion of graduates will not find a career in line with their education.

5. Reforms

As an answer to revolts in the universities at the end of the sixties, the government reformed the governance structure of the universities (University Governance Reform Act 1970). All groups in the university gained the right to participate in decision making.

There are three levels of decision making: the university, the faculty and the level of discipline or subject groups. These levels are not, however, a hierarchy; each of the latter two levels has all great deal of autonomy in teaching and research. On the university level the university council (at most 40 members) has all the power in as far as the law has not assigned special responsibilities to the Board of Governors. The council decides upon the budget and determines the rules that govern the university as a whole. Further it is the policy making body at the university level. Five-sixths of the seats are taken by members of the university: at least one third by teachers (no distinction between ranks), at most one third by the non-teaching staff and by the students each.

The Board of Governors consists of three or five members. The university council elects one, respectively two members, belonging to the category of teachers with tenure, the Minister of Education (2)(the Crown) appoints one, respectively two members,

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(1) The forecast is 160,000 graduates for 130,000 - 150,000 jobs in 1980. In the eighties the discrepancy will rapidly increase. See: "Ontwikkelingslijnen in aanbod en behoefte van academici tot 1990". RABAK-project, February 1975.

(2) In private universities the Board of Trustees.

and the Rector Magnificus is the third or fifth member. The Board is to be considered partly as the executive Committee of the council, partly it has its own responsibilities, mainly in personnel affairs and financial control. Moreover it has to see that legal provisions applying to the universities are adhered to. At the middle level the faculty council has full authority as regards the organisation of teaching and research, and the regulation of examinations. With respect to appointments of professors and readers the council makes recommendations, according to the law, to the Board of Governors. The Crown (or the Board of Trustees in private universities) appoints professors and readers. Other staff are appointed by the Board of Governors, who also decide upon procedures.

At least half of the seats in this council have to be taken by teachers, the other members are elected by students and non-teaching staff (1). The Chairman is elected by the council from the professors and readers.

The discipline or subject group is the smallest organisational unit established by law. All teaching and non-teaching staff, and students (eg assistants) working in the same field (eg macro-economics), belong to such a unit. All teachers with tenure and representatives of the other groups constitute the decision making body of the group. This body decides upon the tasks of each member and has to draft the research programme that has to be approved by the faculty council.

Opinions diverge widely on the healthy or unhealthy effects of this reform which is experimental until 1981. This may partly reflect the different effects on different departments.

5.2 Reform of university courses

In 1975 Parliament passed a Bill, which was brought in by the Minister of Education in 1971, aiming at a reform of university education. In the original text it was stipulated that university courses for the doctorandus and ingenieur degree should, as a rule, take no more than 4 years. For these courses students could not enrol for more than 6 years. This meant a considerable modification of the existing situation, in which courses are not legally restricted in length, a length which is mostly 5-6 years, and in which there are no restrictions at all as regards enrolment. Whereas university programmes should be shortened on the one hand, on the other hand able students could be allowed by the faculty to stay an additional year in the university to do research. Moreover excellent graduates could be appointed for 4 years at a maximum to participate in research projects.

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(1) In the elections representatives are always elected by their own groups.

Vigorous opposition by the newly introduced councils in the university, and by their representatives on the inter-university council, was successful to the extent that Parliament amended the Bill which now reads that programmes may not exceed 5 years. At the same time agreements in Parliament make it very difficult to reject proposals for university programmes taking 5 years. As could be expected, nearly all proposals are now aiming at 5 year courses. It is still uncertain as to what will be the outcome of the struggle between the Minister of Education and the universities.

5.3 Two sectors of higher education

At the end of 1975 the Minister of Education submitted a paper (1) to Parliament in which he expounded the government's longer term higher education policy.

The corner stone of this policy will be that in the long term there will be mainly a diversification of programmes, no longer of institutions. Within a single system of higher education there will be programmes preparing for a research career, both more academic (theoretical) and practical oriented programmes for specialised jobs, and broader programmes appropriate to larger sectors of the labour market.

For the time being two types of institutions will exist: the universities and the new institutions (polytechnics) which will primarily be voluntary mergers of present colleges. The new polytechnics will become the growth sector of higher education. If more study places of a "university type" are needed, one or more polytechnics will provide labour market oriented programmes at university level. An integration of various types of programmes is however not envisaged.

As a short term measure a Bill is proposed to facilitate transfer after the first year, between universities and colleges. College students who do not have the 6 year secondary education certificate may be allowed, by a national committee, to transfer to the universities if recommended by their college.

Parliament has yet to start the debate on these policy proposals.

5.4 The Open University

At the beginning of 1977 the government decided that an Open University would be created following the example of the British Open University. Correspondence courses will constitute the core of the teaching system, probably supplemented by regional study centres and audio-visual technology. Both university and college programmes will be offered.

Since April 1977 a Planning Committee has been preparing the details of the plan which will have to be decided upon by Parliament.

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(1) Hoger Onderwijs in de Toekomst. Tweede Kamer der Staten-Generaal, Zitting 1975-76.